NOVEMBER, MDCCCLXIV.

THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY,

AND

JOURNAL FOR RECORDING FACTS AND ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, MOLLUSKS,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

No. CCLXXVII.

LONDON:
JOHN VAN VOORST, PATERNOSTER ROW.

Price ONE SHILLING.

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No. 6 contains:—Descriptions of the Larvæ of Anthocharis Cardamines, Gonepteryx Rhamni, Argynnis Paphia, Vanessa C-album, Satyrus Megæra, S. Hyperanthus and Chortobius Davus, by Edward Newman. Larva and Pupa of Ripiphorus paradoxus, *S. Stone.* Multitudes of Syrphus Pyrastri in the Isle of Wight, *William Gibson, C. E. Seaman.* Note on Euplexia lucipara, *John S. Dell.* Age of the Larva of the Goat Moth; Sex of Larvæ, *William Gibson.* Peculiarity of the Structure of Chelonia caja, *Henry Moncreaff.* Ophiodes lunaris in Ireland. Nonagria neurica at Horning Fen. Note on Ephyra pendularia, *W. West.* Beautiful Variety of Callimorpha dominula. Toxocampa Craccæ in Devonshire. Food-plant of Ino Geryon. Entomological Society. Sesia Scoliæformis. Food-plant of Coremia unidentaria. Duplicates.

No. 7 contains:—Descriptions of the Larvæ of Chortobius Pamphilus, Polyommatus Hippothoë, Phragmatæcia Arundinis and Zeuzera Æsculi, by Edward Newman. Entomological Periodicals:—'The Entomologist's Monthly Magazine;' 'Young England;' 'The Naturalist.' The reimbibition of Fluid ejected by Tortrix Larvæ, and Peronea permutana at New Brighton, *John Peers.* Gonepteryx Rhamni in Ireland, *Edwin Birchall.* Hybernation of Vanessa C-album, *Rev. E. Horton.* List of Duplicates offered gratuitously. Parasites upon Wasps, *S. Stone.* Locusts in Cornwall, *Thomas Cornish.* Note on Cynips lignicola, *F. Walker.* The Artichoke Gall, *C. Seymour.* Acari on the Wings of Triphæna pronuba, *Rev. E. H. Todd.* Number of changes of Skin in the Smerinthi, *J. R. S. Clifford, Henry Moncreaff.* Taking Moths on the Trunks of Trees, *William Gibson.* Geophilus electricus, *Albert Dumsday.* Pericallia syringaria emerging in October, *William Stewart.* Larva of Acronycta Aceris, *Edwin Tearle.* Entomological Society.

Birds of Canada observed near Kingston, during the latter part of the Summer and in the Autumn of 1857. By Captain HENRY HADFIELD.

(Continued from page 6787).

Redheaded Woodpecker (*Picus erythrocephalus*). In August I shot a handsome old male of this common species. Length 9¼ inches; extent of wings 17 inches. Bill 1 inch 1-tenth; black at the tip, bluish white at the base, where numerous stiff black bristles cover and conceal the nostrils. The head is of a bright crimson. The seven exterior quills black; the eighth has a white spot on the inner web near the base; the tenth white on the greater part of the inner web and tip; the eleventh black at the base, and has a spot of the same on the outer margin towards the point, which is white, and there is a black bar across the inner web; the twelfth much the same, but the black bar decreases in size. The rest of the quills, except the last, are white with black spots. The black shafts of the secondaries contrast beautifully with the snowy whiteness of the webs. The primary and secondary coverts are black, but the latter have glossy blue margins. The back has also a bluish tinge. There is a patch of white on the rump, and the upper tail-coverts are of the same colour. The tail, both in form and colour, differs greatly from that of the young, described in the 'Zoologist' (Zool. 6781). The centre feathers are half an inch shorter than the exterior ones, and of a reddish brown colour. The two exterior feathers white at the base and tips, black in the centre, and the third and fourth are slightly marked with white at the base of the inner webs. None of the tail feathers are doubly pointed, as in the young birds, and the under parts are pure white. The nests, though often placed at no great height, are not readily got at, as the trees chosen are generally of considerable girth and the stems branchless. Though I have in my younger days taken eggs from a crow's nest at the top of a tall palm, it would have puzzled me to have climbed one of these equally tall but stouter trees. The trees in general are not very lofty, but gigantic pines are occasionally to be found so high that crows occasionally perch thereon.

Larus capistratus. Though numerous gulls frequent the sandy shores of this sea-like lake (Ontario) during the summer, I had no means of following them or opportunity of studying their habits; however, one shot out of a small flock, in August, belongs, I believe (having referred to Audubon), to this species. The bill is narrow, and measures along the ridge nearly an inch, and from the gape about half an inch more. It is decurved, and of a dark horn-colour; nostril 3-tenths of an inch long, open, but very narrow. Lower mandible acutely angular and pointed. Forehead white; crown gray, and nape white. Anterior part of the back grayish brown; tips of feathers cream-colour; posterior grayish blue; rump and tail-coverts pure white. Tail nearly even; it has twelve rounded feathers, white at the base and tips, and there is a black band three-quarters of an inch in depth on all but the exterior feathers, which are black on the inner margins only. The under tail-coverts, like the upper, of a snowy whiteness, and very elongated, the centre ones extending beyond the quills. Throat and the whole of the lower parts pure white; under wing-coverts the same. The wing has twenty-six quills, is very pointed, and measures 10¼ inches from flexure; first quill longest; the rest rapidly decrease. The secondaries incurved; the last but one the longest. The first and second primaries are black on the outer webs, and on the inner near the shafts, and for a short space on the margin towards the points, which are black; the rest of the web white. The third quill has the outer web black and white, and the inner is partially margined with the former colour, but the tip is white. Fourth quill black and white, and the rest of the primaries are marked almost in a similar manner. The secondaries are for the most part black, but broadly margined with white, and the three last are tinged with reddish yellow. The exterior primary coverts white; shafts and points black; the rest are white, except on the shafts. Secondary coverts bluish white, tipped with cream-colour. Under wing-coverts white, and those of the secondaries very elongated. Thigh bare for a quarter of an inch above the knee.

Bittern (*Ardea minor*). On the 12th of September I shot a bird of this common but beautiful species. Weight 1½ ℔.; length 23½ inches; extent of wings 3 feet 4 inches. One shot in Newfoundland was about 23 inches in length, so probably they are females, as the length given by Wilson is 27 inches.

Purple Grackle (*Gracula quiscala*). Shot a male of this splendid species on the 25th of September, having been attracted when snipe-shooting by their cry, not unlike that of the European blackbird when about to roost, and their manner of flying is very similar, chasing round and through the bushes skirting the marsh, their habitat. Length 10¾ inches. Wing from flexure, 6 inches; extent 18½ inches. Bill on the ridge 1 inch and 2-tenths; from gape 1½ inch; of a dull black, arched and curved at the point, which is very acute; nostril oval. The bill is about four-tenths of an inch wide at the base, but suddenly narrows, the sides being much deflected and incurved; the lower mandible about an inch long, narrow and pointed as a needle. On the roof of the mouth there is a sharp tooth-like projection three-twentieths of an inch long. The tongue is one inch in length, narrow and fluted towards the end, which is slit and doubly grooved. The eye small; iris light yellow, though Wilson says silvery, but I could not be mistaken in the colour, having examined a wounded bird at noon-day; the pupil is black. The general colour of the plumage of this handsome bird, as its name denotes, is purple, but the shades vary so much with every change of light that it is difficult to describe it. Seen at a distance the grackle appears perfectly black. The head is dark glossy purple, but the feathers about the bill are black; the hind neck blue, bordered with green. The feathers on the anterior part of the back are broadly margined with bright copper, having a greenish tinge. Scapulars very elongated; they are of a violet colour, with a rusty brown tinge, and have obscure black markings. Tail feathers bright blue on the outer webs, dark blue on the inner, with obscure dusky transverse bars; they are all incurved. The wing feathers are of various lengths, but as the bird was moulting I shall not describe the quills further than by stating that they are of a glossy violet on the outer webs, black on the inner, with a bluish tinge. The primary coverts black, narrowly bordered with violet and indigo-blue. Secondary coverts black, shaded with blue on the inner web, and margined on the outer with glossy blue and purple. Smaller coverts dark blue, with bronzed edges and tips. Under wing-coverts black, with a bluish tinge. Throat and breast light blue, tinged with green and violet. The under parts bright copper, with a greenish tinge, but the feathers are black near the shafts, and have a shade of gray. Vent dark indigo. Thigh 2 inches 2-tenths, bluish black, but brown at the knee. Tarsus, toes and claws black.

Hermit Thrush (*Turdus solitarius*). On the 19th of September procured a bird of this species, a male, I believe. Length 7¼ inches; extent of wings nearly 12 inches. Bill on the ridge ½ an inch; from gape 8-tenths of an inch; nostril oval. Upper mandible black, point decurved and notched; the lower one light horn-colour at the base, black at the point. Eye large; head dark olive-brown, back somewhat lighter, and the tail-coverts have a yellowish tinge on the margins. Tail 2 inches 8-tenths in length; it has twelve feathers, the exterior ones slightly exceeding the rest; they are all greenish yellow on the outer webs; hair brown on the inner, faintly but regularly barred with brown, and tipped with gray, the centre ones being a few shades darker than the rest. The wing has eighteen quills; the second longest; the rest decrease rapidly. Primaries greenish yellow on the outer margins, except the first, which is gray, are all hair-brown on the inner margins, and have white and grayish white patches at the base. The secondaries have the exterior webs tinged with greenish yellow, but more faintly than the primaries. Chin white; throat cream-colour; breast tinged with yellow, and marked with spear-shaped black spots, increasing in size towards the breast, which is beautifully mottled with wavy lines of olive-brown, intermixed with buff, gray and white. The belly and under tail-coverts white. Sides gray, barred and spotted with light brown, and there are patches of the same on each side of the vent. Under primary coverts dark gray. Under secondary coverts grayish white, with a yellowish tinge at the base and on the margins. Upper primary coverts dark hair-brown, margined on the outer webs with greenish yellow. Thighs grayish white, brown at the knee. Tarsus of a light reddish brown in front, flesh-colour behind, as are the toes. Tarsus 1 inch 1-tenth. A female subsequently procured is 7 inches in length and 11 inches in extent of wings. The plumage is very similar to that of the male.

Golden Plover (*Charadrius virginianus*). Shot three out of a small flock on the 26th of September; the finest is 10¼ inches in length, and 22½ in extent of wings. Yarrell observes, "I believe that the Asiatic golden plover is a species distinct from our bird, but identical with that of the American continent, in which the bird, though smaller, has a longer beak and longer legs, with a greater extent of naked space above the joint; the yellow spots on the feathers of the lower part of the back more oval in shape than triangular, and the axillary plume is always ash-brown, whilst that of the European bird is invariably elongated and pure white." Having frequently shot the Asiatic plover, I am also inclined to believe that it is identical with that of North America. Temminck remarks, "Les sujets tués dans les régions intertropicales de l'ancien monde sont toujours revêtus du plumage d'hiver; il ne nous est pas parvenu d'individus en livrée parfaite des noces. La race de ces climats est constamment plus petite dans toutes ces dimension." The comparative measurements here given show the superiority in size of the European bird:—

	AMERICAN.	EUROPEAN.
Length	10¼ inches.	$11\frac{2}{10}$ inches.
Extent of wings . . .	22½ ...	23¾ ...
Bill on the ridge . . .	$\frac{9}{10}$ ...	$\frac{9}{10}$ ...
Tarsus	$1\frac{6}{10}$ ...	$1\frac{4}{10}$ ...

	AMERICAN.	EUROPEAN.
Middle toe	1 inch.	1 inch.
Claw	$\frac{3}{20}$ ...	$\frac{3}{10}$ ...
Inner toe	$\frac{7}{10}$ ...	$\frac{7}{10}$ ...
Claw	$\frac{3}{20}$ ...	$\frac{2}{10}$ ...
Outer toe	$\frac{8}{10}$ ...	$\frac{8}{10}$ ...
Claw	$\frac{3}{20}$ ...	$\frac{2}{10}$ ...
Tibia bare	$\frac{8}{10}$ ...	$\frac{5}{10}$ ...

There is also considerable difference in the plumage, particularly as regards the colour of the axillaries, which in the former are of an uniform ash-brown, but in the latter pure white. The spots on the posterior part of the back of the American bird are of an irregular oval shape, but in the European bird they are triangular. The former is a much darker bird, and has considerably less of the golden tinge on the plumage. According to Macgillivray, the centre claw of the European species is half an inch; but this must be a mistake, for I have generally found the claw little more than half that length: so we must look elsewhere for distinguishing marks and features, and they are not wanting, for not only is the tarsus of Charadrius virginianus proportionably longer, the tibiæ more bare by three-tenths of an inch, the axillaries of a totally different colour, the wing more pointed, and the under parts of a dull brown and yellowish gray, but the latter bird is at least a third less in size and weight. Having made these few remarks, I shall now describe it more fully. Bill black; nostril linear; eyes black and large; forehead broad and rounded, light gray, that colour extending to the cheeks, but the whole more or less spotted with reddish brown. Crown of the head black, longitudinally streaked with irregular yellowish brown spots and lines, the latter colour increasing towards the auriculars and nape. Hind neck cinereous-gray, with a yellowish brown tinge. Back black, anteriorly marked with small irregular gray and grayish yellow spots; towards the posterior the spots, increasing in size and number, become more regular, and are for the most part of a golden yellow: the spots are more oval than triangular. Upper tail-coverts black, bordered with yellow spots. Tail 2½ inches in length, has twelve dusky black feathers, nearly even; the exterior one barred with white on the outer web, and spotted with the same on the inner, which is mottled with grayish white, and the tip is slightly tinged with yellow; second barred with grayish white, margined with yellowish white spots, and tipped with the same; third and fourth, though almost similarly marked, are darker; fifth has triangular yellow spots on the margins, and more of that colour at the points; sixth has four triangular yellow spots on the outer margin, which is diagonally barred with yellowish white; the inner web is somewhat similarly marked, but the yellow is fainter, and the spots more irregular. The angular yellow spots on some of the feathers, encroaching on the central black, form a perfect oak-leaf pattern. The feathers are rounded, with the exception of the two central ones, which are oval. The wing has twenty-six quills; primaries black; shafts white, except at the tip and base, which is dusky; the first longest; second shorter by five-twentieths of an inch; third half an inch less than the second; the rest rapidly decrease: they are all slightly tipped and edged with grayish white. The secondaries are dusky black, broadly margined with grayish white; the first abrupt, the second diagonally sloped, third emarginate on the outer web; the rest much the same, excepting a few of the inner ones, which are elongated and tapering, margined on the outer webs with triangular yellow spots, and on the inner with elongated oval ones; tips yellowish white; shafts black; the others are white at the base. Primary coverts black, broadly margined and tipped with white. Secondary coverts dusky, deeply edged with white, and tinged with yellow on the outer web. Upper coverts black, with yellow, gray and white spots on the margins. Scapulars glossy black, with a few yellow spots on the margins; tips yellowish white. Under tail-coverts white, faintly streaked and margined with light hair-brown: they are little shorter than the tail. This lengthened and somewhat minute description of the American golden plover is given to enable those who have not had the advantage of examining it in the flesh, and comparing it with the European bird, to see at once, from the difference in size and colour, that it is a distinct species.

Yellowshanks Snipe (*Scolopax flavipes*). On the 25th of September found a considerable flock of this by no means common species, feeding in the wheat stubble not far from the town. Though rapid in flight, they are steady on the wing, and more readily shot than the common snipe. I found no difficulty in securing specimens, for when one had fallen, the flock wheeling round, passed and repassed over the dead or dying birds before resettling in the stubble, which they often did at no great distance, and it was not until ten of their number had fallen that they finally disappeared. One of the largest measures 9½ inches in length, and 18¼ inches in extent of wings.

Bluebird (*Saxicola sialis*). On the 29th of September shot three birds of this species. Though in form the bluebird bears a striking resemblance to the European robin, Buonaparte was right, I think, in removing it from the Sylviæ, where Wilson had placed it; neither its hooked beak nor stout legs fitting it to be so associated: its proper position is with the Saxicolæ. It was in passing through an open glade that I first observed them; they were shy and wary, keeping out of gun-shot, and as the evening was closing in I almost despaired of getting any; and it was not until I had concealed myself behind an old stump that I managed to shoot them. They were taking their evening's repast, much after the manner of the flycatcher, to which they are seemingly allied, occasionally settling on the ground for a second or two, then resuming a position on stump or branch,—more frequently the former. When alighting on a tree, it was generally on the lower or decayed branches. They were constantly darting about, whether in quest of flies or gnats I could not see, and subsequently omitted to observe. Their flight is buoyant, often soaring, too, before alighting. When stationary, which they seldom were for many seconds, the wings were drooping and feathers ruffled. In width of mouth it greatly resembles a flycatcher. A fine male is 6¾ inches in length, and 11¾ inches in extent of wings. The female is of the same size as the male, but the plumage is less brilliant.

Winter Wren (*Sylvia troglodytes*). In September I procured a wren of this species. Though about the size of the common European wren, I do not agree with Wilson, who says, "I strongly suspect it is the same species as the common domestic wren of Britain." The plumage is decidedly darker, as stated in my former notes (Zool. 6749), the feathers of the breast more elongated, and the tail is longer. The throat and fore part of the breast of the winter wren are of a light brown, tinged with rufous; these parts in the European bird are pale grayish brown. The belly of the former is black, spotted with white and reddish brown; that of the latter grayish white, tinged with yellow and spotted with light brown. The tail of the winter wren is dark reddish brown, broadly barred with black; that of the European wren light reddish brown, with dusky bars. Back of the winter wren dark reddish brown, with black and white spots; back of the European wren light reddish brown, minutely barred with dark brown. The bill of the winter wren is black; the bill of the European wren of a light horn-colour. The tarsus of the winter wren is dark brown in front, black behind; toes and claws black: in the European wren these parts are many shades lighter. But I need not carry on the comparison, the winter wren being undoubtedly a distinct species. Length 4 inches 1-tenth; extent of wings 5¾ inches.

Ruby-crowned Wren (*Sylvia calendula*). On the 9th of October shot one of these diminutive birds. Length 4¼ inches; extent of wings 7 inches.

Little Sandpiper (*Tringa pusilla*). Procured, in October, a specimen of this minute species. Length 5¾ inches; extent of wings 11½ inches. This must be a scarce species, as I did not meet with it again.

Buffelheaded Duck (*Anas albeola*). In October I procured one of these small ducks. Length 15 inches. Both in size and shape it bears a strong resemblance to the teal, like which it has but sixteen feathers in the tail; and the eye is placed considerably lower down than I have previously observed it in the duck, so that a line drawn from nostril to nape passes through it. The bill, too, unlike that of a duck, is shorter than the head, and gradually increases in width towards the point, like that of the wigeon. Had I not read what Wilson and Audubon have written, I should have little hesitation in placing it with the Querquedulæ.

Yellow-rump Warbler (*Sylvia coronata*). Shot a bird of this species in October. Length 5½ inches; extent of wings 8¼ inches.

Carolina Rail (*Rallus carolinus*). On the 5th of October shot one of these common birds. Length 8¼ inches; extent of wings 13 inches.

Virginian Rail (*Rallus virginianus*). On the 5th of October a female of this species was shot. Length 9¾ inches; extent of wings 14 inches. These birds are very tame, and will approach within a few yards of the sportsman when standing or reloading in a swamp.

Blue Jay (*Corvus cristatus*). On the 5th of October shot a bird of this beautiful but common species. Length 12 inches; extent of wings 16½ inches.

Great Heron (*Ardea Herodias*). In October I procured a bird of this species, weighing 5½ lbs. Length 4 feet; extent of wings 6 feet 3 inches.

Whitebreasted Hawk (*Falco leverianus*). On the 7th of October I observed, when snipe-shooting, two hawks or buzzards. One was dark, but with the whole of the under parts white, possibly the white-breasted hawk, said to be the adult of Falco borealis. The other, which alighted on a tree, appeared of a bluish gray or slate-colour.

Swamp Sparrow (*Fringilla palustris*). On the 17th of October, when shooting in a marsh, observed among the alders, which they were actively perambulating, a number of these handsome birds, so like our reed bunting in size, colour and habits; so tame, too, that I found no difficulty in securing specimens. Length 6 inches; extent of wings 8½ inches.

Chipping Sparrow (*Fringilla socialis*). On the 17th of October I examined one of these common sparrows. Length 5½ inches; extent of wings 8¼ inches.

Snow Bird (*Fringilla nivalis*). In October shot two of these birds; though common, they are not very numerous in this neighbourhood, but, like most of the smaller species, are easy of approach. Length 6 inches; extent of wings 9¼ inches.

Shore Lark (*Alauda alpestris*). In October I found a small flock feeding among the wheat stubble, and though several shots were fired they did not quit the field until three or four of their number had fallen. One slightly wounded in the wing was caged and brought to Scotland, where it met with an untimely fate, having been killed by mice or rats: it frequented the perch, and had become very tame: it was a male bird, but never sang, though emitting at times a faint plaintive note. When disturbed, I observed one or two, on quitting the stubble, perch on a rail. It cannot be a very common species, or I should have met with it oftener. They were in fine condition, *i. e.*, very fat. One of the largest is 7¼ inches in length, and 13 inches in extent of wings.

Snow Bunting (*Emberiza nivalis*). On the 29th of October, I found a large flock feeding in a stubble-field; when disturbed they rose at once to a great height, and were soon lost sight of, ascending by circular sweeps, the birds much scattered; stragglers to be seen sporting and chasing about in all directions, but invariably reuniting with the flock, which, though rising rapidly, would occasionally drop a considerable distance, and then as quickly reascend. Having watched their return, I observed them alight on a distant part of the field, which was of great extent. On following them up they again took wing, three only having fallen to my shot, in consequence of their loose order of flight. The screeching of two wounded birds brought the covey back before I had time to reload, when, passing and repassing within a few yards of me, they hovered and fluttered over them with a plaintive reiterated cry, and a few I observed settle on the ground close to the dying birds. They are strong and tenacious of life, struggling to the last: one I was nearly losing, in consequence of the rapid manner in which it ran through the stubble to some broken rocky ground, to which it was traced by the blood shed by the way, and with which the plumage was bespattered: it was quite dead when picked up. One or two more having been shot, the flock suddenly disappeared. They measure about 6½ inches in length, and 12 inches in extent of wings. One word, in passing, respecting the somewhat vexed question of the perching habits of this and other species, and I would remark, from the little experience I have gained, that the habits of birds are to be correctly studied in their natural haunts only, and that we can form no just conception or estimation of them by the occasional view of a few wandering stragglers. That the snow bunting, on this continent, is an occasional percher one need not be a close observer to find out. I certainly had not seen them half a dozen times before I remarked that, on being disturbed when feeding, they would, on leaving the stubble, fly into the trees; and on one occasion I remember being struck with the peculiarly beautiful effect it had, the white plumage contrasting with the green foliage, making the trees appear as if dotted with flakes of snow or white blossoms.

Roughlegged Falcon (*Falco lagopus*). On the 30th of October a handsome female of this beautiful species was secured, but not until it had been twice wounded. When on the look out for the golden plover on an extensive plain, or clearing, two of these birds were observed soaring at a great height, but before long one ventured within gun-shot, and was sweeping past in fancied security, some seventy or eighty yards overhead, when down it came, apparently stunned by one of the large cartridge pellets, but, before reaching the ground, recovered itself, and would have escaped had not my companion winged it by a second shot. Two mice were found in the œsophagus, and the remains of three more in the stomach. Length 20½ inches; extent of wings 49¼ inches.

Dusky Duck (*Anas obscura*). Procured one of these common ducks in October.

Redheaded Duck (*Anas ferina*). On the 2nd of November I inspected a duck of this species. Length 20¼ inches; weight 2¾ lbs.

Redwinged Starling (*Sturnus predatorius*). Shot one of these common birds on the 2nd of November; at this season they flock with the cow bunting, though far less numerous. Length 9½ inches; extent of wings 14¼ inches.

Cow Bunting (*Emberiza pecoris*). On the 2nd of November I found an immense flock of these birds, the most common and numerous species, perhaps, in North America; they are to be seen in vast and countless numbers, appearing at times like black clouds in the distance. Having marked the flock down, I approached under cover of the Indian corn, on which they were feeding, and on their taking wing fired, when some forty or more fell to the double discharge. They were not found very palatable. Wilson has given a lengthened description of the habits of this species, so like the cuckoo, neither building nor incubating. That so numerous a species should find suitable nests wherein to lay or deposit their eggs seems most wonderful, so that one might be inclined to doubt it, if not authenticated by such a naturalist as Wilson. What would be thought of myriads of cuckoos laying their eggs in the nests of some half-dozen species of our smaller birds? It is hard to divest oneself of the idea that those observed by Wilson and others during the breeding season might have been stragglers, and that the cow bunting may pair, build and incubate in a higher latitude.

Hairy Woodpecker (*Picus villosus*). On the 6th of November a bird of this common species was shot. Length 9 inches; extent of wings 14 inches.

Downy Woodpecker (*Picus pubescens*). On the 6th of November likewise procured one of this species. Length 6 inches and 6-tenths; extent of wings 11¼ inches. Like the former, it is so abundant that one can scarcely enter a wood without finding it. Their shrill cry and incessant tapping is heard far and wide, and one has only to inspect the decaying timber to be convinced of the innumerable small woodpeckers that inhabit these vast and boundless forests, as few old trees are without some holes. Temminck, when describing the European woodpeckers, says, "Ces oiseaux vivent solitairs dans les forêts; ils se cachent au moindre bruit." But it is not so with those of America, which are frequently to be seen on the trunks of the trees within a few yards of one. These remarks refer to the smaller species only, the larger being more wary. Not only the woodpecker, but most species in North America are tamer than the birds of Europe, owing, no doubt to their being so little disturbed or molested in a thinly populated country like this.

Ruffed Grouse (*Tetrao umbellus*). In November shot a bird of this handsome species, which is here called the partridge, but is more like the pheasant, particularly about the head and toes: its habits, too, are very similar, concealing itself among the under-wood, and when disturbed, rising with a whirring noise, threads its way with wonderful facility between the trees and tangled branches of the fallen timber, so that they are not readily shot. Like the pheasant, too, it roosts among the trees. It feeds, at least at this season, solely on beech-masts, the crop of the bird in question and of one subsequently shot being crammed with them. Wilson says nothing of this, though he mentions both their summer and winter food. Weight 1½ ℔.; length 18 inches; extent of wings 21 inches. The other specimen referred to is 18½ inches in length, 23½ inches in extent of wings, and 1¾ ℔. in weight.

Goldeneye (*Anas clangula*). In November procured a male of this species. Length 18¾ inches; extent of wings 27¾ inches. The white patch on the fore part of the cheek is more of a kidney than oval or egg shape, as represented by Macgillivray, vol. ii. p. 174.

Black and White Dabchick (*Podiceps cornutus*). One shot on the lake in November is 14 inches in length and 23 inches in extent of wings.

Passenger Pigeon (*Columba migratoria*). In November I examined a bird of this common species (a female, I believe). Length 15½ inches; extent of wings 23½ inches. A male subsequently shot measures 17¼ inches in length. When reposing by day they prefer, I am informed, the dead to the living branches. Though I have occasionally seen considerable flocks, I must confess to being disappointed as to their numbers; either I have been unlucky or the passenger pigeon must be on the decrease in these settlements. As to their amazing rapidity of flight, there can be but one opinion. As seen on the wing they resemble greatly the common paroquet of India.

Summer Red-bird (*Tanagra æstiva*). Shot a female Tanagra (date omitted). No bird has puzzled me more than this, and had it not been for the kindness of a neighbour it might have been long ere identified. I do not think so great a dissimilarity exists between the male and female of any of our European birds, the male with its brilliant red plumage, quills excepted, contrasting strongly with the yellowish green colour of the female. Length 6½ inches; extent of wings 11 inches.

Redbreasted Merganser (*Mergus serrator*). Procured a young bird of this species on the 27th of November. Weight 1¾ ℔.; length 20 inches; extent of wings 32¼ inches.

Goosander (*Mergus merganser*). In November obtained a female measuring 25 inches in length, 35 inches in extent of wings, and weighing 3 ℔s.

Blackthroated Loon (*Colymbus arcticus*). In November procured one of these birds. Weight 2½ ℔s.; length 24½ inches; extent of wings 40½ inches.

Purple Finch (*Fringilla purpurea*). On the 4th of December shot one of these common but handsome finches. Length 6 inches; extent of wings 9½ inches.

Carolina Nuthatch (*Sitta carolinensis*). Shot a bird of this numerous species on the 5th of December. Though about the size of the

European nuthatch, it differs much in colour, the crown of the head, nape and anterior part of the back being black. The whole of the under parts from chin to vent white. Under tail-coverts bluish white, broadly margined with reddish brown. Primaries and secondaries black, margined and tipped with white. Second, third, fourth and fifth quills spotted with white on the outer webs, and both primary and secondary coverts are broadly tipped with white, forming a bar on the wing. Inner secondaries bluish gray on the outer webs. The cheek is white, and there is no black band running through the eye as in the European species. Length 5 inches and 9-tenths; extent of wings 10 inches and 6-tenths.

Meadow Lark (*Alauda magna*). Rather a common species in this neighbourhood, where the woods have been extensively cleared. They frequent the long grass and clover, and when disturbed do not, like the sky lark, soar aloft, but flutter along at no great height; their being in a state of moult may occasion this. They would frequently resettle within thirty or forty yards of me. One I observed, after being fired at, take a distant flight and settle on a tree. The plumage of the back is very similar to that of our sky lark, and though undoubtedly a handsome bird, the bright yellow of the under parts is in too strong a contrast to the reddish brown and black of the upper; the transition is too sudden, there being no shading or blending of colours. Wilson looked upon it as "eminently superior in plumage, as in sweetness of voice," to the sky lark; however, I cannot think that the latter would be improved by having a bright yellow breast and belly. As to its song, I never chanced to hear it. They are about twice the size of the sky lark.

Yellow Bird or Goldfinch (*Fringilla tristis*). The white, downy, lichen-covered nests of this common but beautiful and elegant little bird (already described) are to be found in considerable numbers among the stunted hawthorn bushes abounding in this rocky ground; so compact are they that they weather the winter, for I have observed many old nests still adhering to the branches.

A small bird, greatly resembling our titlark, was shot, which having failed to identify, I shall not now describe.

After the date last mentioned few birds were to be found; one might walk miles without seeing half a dozen kinds; I did not even notice a crow for some months. The nuthatch, woodpecker, and a few other species, have the woods to themselves, and a solitary hawk may chance to be seen soaring aloft. The autumn having proved the mildest known for many years may account for the late stay of some of the species enumerated, the purple finch for instance. The descriptions, where given, are incomplete: under the circumstances they could hardly be otherwise, as they were often hurriedly jotted down after a hard day's walk, so the reader must excuse any want of order or method in the arrangement.

HENRY HADFIELD.

Ornithological Notes from Shetland. By HENRY L. SAXBY, M.D.

(Continued from p. 9243.)

Peregrine Falcon.—The young peregrines which left their nest on the 28th of June remained in its vicinity until the 2nd of July, when they ventured inland with their parents. I am told that at night they occupy any part of the cliff which takes their fancy, and that they have now entirely deserted the nest. Although several pairs breed regularly in our cliffs, it is very seldom indeed that the eggs or young are obtained, on account of the extremely inaccessible position of the nest. I have only upon one occasion succeeded in getting a close view of a nest, and that one had most certainly once been the property of ravens; the young birds had flown about a week previously. The rock-climbers can give me no information as to whether this species ever builds its own nest. The peregrine is very destructive to the wild fowl, sometimes even killing the lesser blackbacked and herring gulls, but kittiwakes seem to be its favourite food during the breeding season. It is equally partial to rock doves at all times of the year, but so swift is their flight and so perfect their command of wing that they very often elude pursuit and escape to their caves. Long observation has nearly convinced me that the peregrine seldom, perhaps never, strikes its prey while the latter is upon the ground: why, I am unable to conjecture, unless it be that it dreads the sudden shock. Any person who has seen a peregrine strike a bird in the air must have observed that the sudden contact causes them both to descend for many yards, and it is easy to imagine that a very severe shock might be the result of a swoop upon an object resting upon the unyielding surface of the ground. It appears highly probable that, in striking a bird in the air, the hind claw alone is used, for in newly-killed specimens I have frequently seen down, blood and feathers adhering to that particular claw alone. This is what I mean by *striking;* therefore, in making the statement that the bird never *strikes* its prey upon the ground, I do not mean to deny that it stoops and carries away small animals. But it procures these in a different manner. I have seen it leisurely follow a rabbit, and then drop quietly upon it, in much the same manner as an owl drops down upon a mouse. There was no terrific swoop, and no long, gaping wound inflicted upon the unfortunate prey, yet all this becomes necessary when the victim happens to be a bird, driven by terror to its utmost speed. But it does not follow that because one single observer has never seen the peregrine strike its prey upon the ground, such a circumstance never occurs; therefore the matter must remain undecided in my mind until some kind reader favours me with the result of his own experience. Once, while I was walking in this neighbourhood, I heard a sudden rushing over my head; a tame pigeon appeared before me for a moment, and, like a flash of lightning, a peregrine struck it and sailed off. The ill-fated pigeon fell dying to the ground, and on picking it up I found a deep gash extending from the rump to the shoulders. Several times, after a pigeon has been struck I have noticed that the head was nearly torn off. Of the unwillingness of the peregrine to strike a bird in the water I was once witness to a well-marked instance. On the 9th of January, 1861, I was crossing the marsh at the head of the Loch of Cliff, when my attention was attracted by the struggles of two large birds upon the ground, about a couple of hundred yards distant. I immediately hastened towards the spot, when one of the birds, a peregrine, skimmed hastily away, and soon afterwards the other bird, which proved to be a wild duck, flew heavily for some distance up the deep burn which feeds the loch, and alighted in the water. It appeared to have suffered such injury that, thinking I should be able to catch it, I followed it up. Upon my approach it rose upon the wing, and began to follow the course of the burn, keeping about ten feet from the surface. Very soon there was a rushing sound overhead, down came the peregrine with the swiftness of an arrow, and the duck was only just in time to save itself by dropping hurriedly into the water, leaving its enemy to dash about fiercely far above, for the peregrine rose to a considerable height the moment it missed the stroke. Again and again I put up the duck, and each time with a precisely similar result, the peregrine making a dash at the poor persecuted bird every time it rose, and the latter as regularly avoiding the stroke by dropping into the water, where it was allowed to sit in perfect safety. At length the duck becoming much fatigued, concealed itself beneath some overhanging weeds at the edge of the bank, from whence it no doubt beheld the departure of its two enemies with great satisfaction. The boldness of the peregrine astonished me not a little; in its eagerness for the chase it became utterly regardless of danger, and several times came so near me that I could easily have reached it with a coach-whip. It appeared to be an old bird in magnificent plumage, and it may easily be imagined how deeply I regretted that my gun was a couple of miles beyond my reach. Although peregrines are neither so bold nor so numerous as they were formerly, they still visit the houses and commit some considerable havoc among the poultry and the tame pigeons, but as they pay their visits very early in the morning they are seldom caught in the act. This bird requires a heavy shot. I have known it sail away after having received the full benefit of a charge of No. 4 fairly in the breast, at the distance of little more than thirty yards, and with sufficient force to knock out many of the feathers. It is a very common thing to see a peregrine sitting upon a wall near a farm, or upon one of those large isolated stones which lie scattered so abundantly over the hills, but I never knew this bird shot under such circumstances, except once, when it happened to be gorged with snow buntings, and I ran up within shot before it could get away. In my ignorance of the ways of the bird, I used to be sadly tantalized. I would see one sitting upon a large stone, and, there being no cover, would walk rapidly up, all prepared for a shot. It was not often that I was allowed to get within range, but when, upon rare occasions, I succeeded in doing so, I would stop suddenly, certain either of a sitting shot or of a chance as the bird rose; but the result was always the same,—no matter how quick I was,—the very second that I stopped the provoking bird dropped over to the opposite side of the stone and skimmed along the ground, not to reappear until long out of shot. The merlin has the same habit.

Arctic Tern.—Although the arctic tern usually commences laying about the 14th of June, I did not see any eggs this season before the 4th of July. This species breeds abundantly upon most of the small retired holms, as well as upon many of the larger islands. They usually breed in company, and the moment an intruder appears the whole of the birds rise, and hovering above his head, uttering their well-known cries, never cease these tokens of displeasure until he has quite left the spot. Some years ago I was in the island of Hunie, when a hooded crow paid a visit to the breeding-ground there, with what intention I know not, unless he felt himself unable to resist the attractions offered by the eggs and young birds. Instantly the whole body of terns arose, and assailed him so determinedly that he was glad to make off with all possible speed for the opposite shore. But his retreat was not considered sufficient, and the angry little terns followed him like a swarm of bees, even after he had left the island. One made a dash at him, and he stooped to avoid the blow; another and another followed up the attack so rapidly that the crow, dropping as each one approached, gradually descended nearer to the surface of the water without being able to rise a single foot. Lower and lower he went, until at last the tips of his wings dipped into the water, and then his fate was decided. The poor fellow cawed and struggled most desperately, and made tremendous exertions to rise, but this only hastened his end; his feathers became saturated, and soon his head dropped beneath the surface. Seeing him motionless the terns now appeared to be satisfied, and, after a few more dashes towards his body and a few more cries of anger, they returned peaceably to their nests. In a late number of the 'Zoologist' (Zool. 9164) Mr. Harting inquires whether this species "invariably lays upon the ground without any nest." As no answer has yet appeared, I beg to offer what little I know of the matter. In these islands the favourite situation for the deposition of eggs is a sandy or gravelly beach, or a ledge of a rugged bank which has been broken by the winter gales: in such places the eggs are merely laid in a hollow scraped out by the bird; but if the soil of the bank happens to be wet, a small quantity of gravel is sometimes interposed. Often, however, the eggs are laid among the short grass further inland, and then the hollow is almost always found to contain a few pieces of dead weeds or dry grass by way of lining. Occasionally, as in Hunie, the spot selected is the dry gravelly soil among stones and rocks some distance from the beach: in such situations I have found hundreds, perhaps thousands of eggs, but only in a few instances have I seen any attempt at a lining to a nest. These few remarks may not be precisely what was required, but still they have this merit, that the arctic tern being the sole representative of its genus in Shetland, there cannot possibly be any mistake as to species.

Kestrel.—Several pairs of kestrels have hatched here this season in the sea-cliffs. Both old and young birds are now constantly to be seen hovering over the fields. I am very much inclined to believe that this species only visits us in summer.

Rednecked Phalarope.—On the 6th of July a lad shot a pair of rednecked phalaropes as they rose from a piece of marshy ground near the Loch of Belmont, a few hundred yards from the sea. I only saw the female; it was in perfect summer plumage, and contained ova about the size of No. 1 shot. Although the rednecked phalarope breeds in Orkney, I am not aware that it has hitherto been recorded, even as a visitor, to these islands.

Storm Petrel.—Most sea birds are unusually late in laying this year. Storm petrels nearly always commence laying about the middle of June, but this season no eggs were obtained before the 7th of July. In 1861 I found fresh eggs as late as the 15th of August. This species breeds abundantly in this island (Unst), whole colonies of them being found deep down among large loose stones upon the beach, among loose stones and rocks in the cliffs, and occasionally in incomplete rabbit-burrows, not more than two or three feet deep. During the day I have always found the sitting birds silent until the nests began to be exposed by the removal of the stones, but at night they keep up a constant chattering. At such times one is of course immediately attracted to the spot, but during the day-time I have never discovered the nests otherwise than *by scent.* It is almost impossible to pass over the stones under which the nests lie without perceiving the strong peculiar smell which is never absent from birds of this genus. The single egg is deposited upon a few pieces of dry grass, heather, or dead plants, often intermingled with pieces of dried mud. It is very rarely laid upon the bare ground. I once found two eggs in one nest, but fortunately for my peace of mind there was a bird upon each. The egg varies greatly in size, though very little in form. The colouring also is a little remarkable. I have specimens perfectly white, others with an almost imperceptible ring of faint red spots at one end, and others again with the ring exceedingly well marked. I have sometimes fancied that incubation has the effect of obliterating these marks more or less; but it is very certain that fresh eggs are often perfectly white, without the faintest appearance of a ring. A very short time should be allowed to elapse before the eggs are blown, for they very soon spoil. The same remark applies to the eggs of Richardson's skua, but I am utterly unable to account for the fact. The young are at first covered with a beautiful and exquisitely soft grayish black down. The parent bird sits closely to the egg, and when taken in the hand immediately throws up several drops of clear oil, which, by the way, is by no means so abominably offensive as some people imagine it to be. I have very seldom seen petrels flying in the day-time, and upon the few occasions on which I have witnessed such an unusual sight the weather was foggy, and the birds were fluttering with loose, uncertain flight, very near their nests. The fishermen regard the petrels with great superstition, and relate many strange tales about them. It is certain, however, that during the bright summer nights, when the boats are thirty or forty miles from land, and the cleaning of the fish commences, hundreds of these strange birds suddenly appear upon the scene, although not one was to be seen previously. They often follow the boats for many miles upon their homeward way. Many of the fishermen in various parts of Shetland have assured me that sometimes, in the uncertain light, they have seen what appeared to be the buoy marking the situation of the lines, but that on pulling up to it they have found it to be a perfect mass of petrels assembled round a piece of fish-liver.

Goldeneye.—On the 14th of July there were several goldeneyes upon the Loch of Belmont, and they are no doubt still remaining there, for I have seen them in that locality at all times of the year. Eggs precisely resembling the one figured by Mr. Hewitson as belonging to this species have been brought to me from the neighbourhood of the above loch. I believe that, in an early number of the 'Zoologist,' the late Mr. Thomas Edmondston mentioned the goldeneye as breeding in Shetland. [Mr. Edmondston's words are "appears to breed here." See Zool. 463.—*E. N.*]

Heron.—Herons, which left us about the end of winter, re-appeared upon the coast about the 28th of July. Not one is to be seen in this island in spring, but there can be no doubt that a few remain to breed in other parts of Shetland, for I have bought unmistakeable specimens of the eggs, which were taken from the high cliffs in the south part of the mainland. During the winter we often see small flocks of these birds upon the shores. As a rule they are very difficult to approach, but nevertheless they may sometimes be taken unawares, as was the case in the early part of the year, when my brother-in-law, Mr. David Edmondston, returning home after sunset, jumped over a turf-wall into the midst of about a dozen. I can only suppose that the thick heather deadened the sound of his footsteps.

Redthroated Diver.—Although most of the redthroated divers are now either sitting or hatching, I obtained two fresh eggs from the island of Grunie on the 29th of July. I never saw any others like them; they are of a very pale clay-colour, spotted with dark purplish brown. This bird is now in beautiful plumage, the red throat being in its most perfect state.

Golden Plover.—Golden plovers are now collecting into flocks. Somewhat later in the year large reinforcements arrive, and for several weeks afterwards enormous flocks are to be met with. Afterwards the greater number leave us, probably for the south, but they always leave enough behind them to afford excellent and abundant sport during the winter.

Starlings.—Families of starlings are now joining. The flocks, though still comparatively small, are steadily increasing.

Twite.—Twites are also flocking, but fresh eggs are still to be found.

Ringed Plover.—Ringed plovers are gradually descending from the hills and approaching the shore, where as many as a hundred and more are already to be seen together. The flocks will not break up before next spring.

Black Guillemot.—Black guillemots are now hatching. They breed in crevices of cliffs, among rocks upon the beach, and sometimes beneath large stones upon a grassy island. They lay two eggs, which are always deposited upon the bare ground. I have a very beautiful series of the eggs, but have as yet only succeeded in obtaining one of the warm, yellowish variety described and figured by Mr. Hewitson. The yolk of the black guillemot's egg is of a very dark reddish colour, so that when an egg becomes stained with it in the process of blowing it almost looks as if the shell had become smeared with blood. Young birds will very soon be abundant. By sitting quietly near the water's edge and occasionally tossing in a small stone, they may easily be attracted quite close to the observer, who will then have an excellent opportunity of watching their movements beneath the surface.

Baltasound, Shetland, July 30, 1864.

Meadow Pipit.—Very early in August meadow pipits descended from the hills, where they had been breeding, and, accompanied by their young, appeared in great numbers in the fields, from which the hay had just been cleared, and there they fed plentifully upon the fallen seeds. I rather suspect that with us this bird is regularly migratory. From April to August it is constantly to be met with upon the hills; then it descends to the low grounds, remaining there until about the middle of September, between which month and the following spring I do not remember having met with a single individual. The meadow pipit is known here as the "hill sparrow," while the rock pipit goes by the name of "tang sparrow." Among other varieties of the egg of the meadow pipit I have some which are pale grayish white, mottled with light bluish gray.

Curlew.—The first curlews returned to the shore on the 7th of August. They seem to remain in families until the winter is nearly over, when they assemble in flocks, soon afterwards breaking up and pairing. I have not observed them in families during winter in any places besides Shetland. Although the greater part of their time is spent upon the shore, they come inland to feed during heavy rains, when the ground has become thoroughly soaked.

Cuckoo.—On the 10th of August, a cuckoo—a very rare visitor to these parts—was shot here by a friend of mine, who mistook it for a hawk. I saw it about a week previously, and supposed that the strong winds from W. and S.W. had driven it over to the island. It was a young bird of the year, full grown and in perfect plumage. Six years ago I several times heard the cry of a cuckoo near this place, and some weeks afterwards a young one, scarcely fledged, was shot: there can be no doubt that it was hatched here.

Knot.—The first knots appeared on the 17th of August. There is very good reason to believe that it occasionally remains here to breed. In summer I have shot old birds in the rich chestnut plumage peculiar to that season, and also several young birds very weak upon the wing.

Pied Wagtail.—A pied wagtail was seen here on the 20th of August. This species never breeds here, but a few visit us almost every summer.

Wild Duck.—A good many wild ducks still breed near the Lochs of Cliff, Watley and Belmont, and a few beside the small lochs upon the peat moors. The nests are always placed close to the water's edge among the tallest herbage. The young birds are now well fledged.

Sky Lark.—I have not heard the song of the sky lark this month. The birds themselves are very abundant, but the only sound they utter is a low chirp as they rise from the ground.

Merlin.—Plenty of merlins, both old and young, are now to be seen, but they very seldom come within shot. In most of its habits the merlin very closely resembles the peregrine falcon, only it is more daring. It is continually seen in chase of the house pigeons, and now and then it kills one; but its strength, though great for so small a bird, is insufficient to enable it to carry off so heavy a prey. The merlin usually builds in the sea-cliffs, constructing rather a slight nest of heather, dead weeds and dry grass. The nest is also found upon the hills among heather, but I have never seen it in that situation. Although in some seasons the birds themselves may almost be considered abundant, I have always experienced the greatest difficulty in obtaining the eggs.

Snowy Owl.—The snowy owl which I have already mentioned as having been brought to me on the 20th of June (Zool. 9240), is still as healthy as an owl can possibly be. It appears to be a male, and it must be of some considerable age, for it is very much whiter than most specimens which have been seen here. For about the first week of his imprisonment he would not touch food, although I kept him as quiet as possible, and offered various temptations in the form of birds of various sizes, rabbits and raw meat. For the first two days he was decidedly in the sulks, retiring to the most distant corner of the cage, and scarcely taking any notice of my approach; but afterwards he became more lively, and the moment I went near he would dash wildly about, snapping loudly with his bill, and hissing in great displeasure. At length, fearing that he would starve, I was compelled to resort to main force, and accordingly fed him for several days with ringed plovers, which I pushed down his throat as far as I could reach, first cutting off the head, wings and legs. The process seemed rather to astonish him, and no sooner was the operation over than he stretched his neck, tightened the feathers upon his head so as to make it appear ridiculously small, closed one eye, inclined his head first to one side, then to the other, and altogether behaved in such an exceedingly comical manner that it was with no little difficulty that I could identify the foolish-looking bird before me with the mighty Strix nyctea, which always looks so solemn and sedate in books and museums. However, in a very few minutes afterwards, when he had been returned to his cage, he resumed his former grave appearance, maintaining it until he received his next meal upon the following day. I observed that the pellet of bones and feathers was never cast up earlier than two hours after each meal; sometimes it was many hours later. One lucky day, about a fortnight after he came into my possession, I found a dead mouse, and forthwith deposited it in the cage. Such a tempting morsel was not to be resisted, and upon my return very shortly afterwards it had disappeared: the ice was fairly broken at last, and thenceforward he fed himself. After this I placed small birds before him regularly every evening, and they as regularly disappeared in about an hour's time. For many days I endeavoured to get a view of the bird while in the act of feeding, and frequently spent an hour at a time peeping through a small hole in the side of the cage, but it was time spent in vain, for he would never touch his food while I remained near, although he soon devoured it after my departure. I fed him regularly at sunset, and still continue to do so, never omitting a peculiar whistle when I bring him food. He very soon learned the meaning of the sound, and although at other times he regards my presence with great composure, the moment I make the usual signal near the outhouse in which he is confined I hear him jumping impatiently about the cage, and even when I conceal the food from sight, he flaps his wings and comes as far as the netting will allow him, evidently showing that the object of my visit is perfectly understood. It is only of late that he has condescended to feed in my presence, and I have endeavoured to avail myself of the privilege to the utmost. The first thing that I observed was the demolition of the theory that because the feathers extend to the tip of the bill this species never tears its prey. No matter what may be the fashion among others of his kind, this one while he is feeding throws the feathers back upon either side, thus laying the bill completely bare, consequently when he has finished tearing up a bird or a rabbit the feathers are as free from soil as when he commenced. In some former notes upon the snowy owl (Zool. 8635) I asserted that the bird almost invariably swallows its food whole. Now although this remark has been amply confirmed, not only by my own observations, but by those of some of our best naturalists, it is quite certain that the individual of which I am writing offers a marked exception to the rule. Possibly when in a wild state, he too used to swallow his food hurriedly, and without tearing it, but that now, fearing no disturbance, he proceeds more leisurely, and devours it piecemeal. His habit is first to tear off the head, next to pluck out most of the quill-feathers, and then to tear off and swallow large pieces of flesh,—and bone also, if the bird be smaller than a crow. He will proceed in the same manner even with a twite or a sparrow. The food is always held down with the foot. A young well-fledged herring gull supplies him with a single meal, and he always picks the larger bones very neatly. In the daytime he remains inactive, and seems to sleep, although the slightest sound is sufficient to put him upon the alert. Towards sunset he becomes brisk and lively, and shakes off all drowsiness. I used to give him a large stone to sit upon, but now he prefers a thick round branch, which he seldom quits: I am quite surprised to find that in perching upon it he places only two toes of each foot in front. He knows me well from other people, and seems pleased to see me, and although for the first few weeks all attempts at familiarity were furiously resisted, now, when I hold my hand above him, he merely snaps and hisses a little, but the moment I begin to stroke him upon the head he closes his eyes and remains perfectly quiet. A few days ago I threw the food to the back of the cage instead of to the usual place in front. This seemed to puzzle him a good deal; he repeatedly looked at it over his shoulder and then at me; at last he opened his bill to the full extent, and gave forth a shrill, chirping kind of scream, the first sound, except a hiss, that I ever heard him utter. It is not always that I can find time to shoot a sufficient supply of birds or rabbits, and fresh meat is a rarity which can only be procured at certain times of the year: perhaps therefore some of my readers will kindly inform me whether I may safely offer sea-fish. The man who brought me this owl once kept one himself for nearly two years. It was rather closely confined at first, but subsequently it was allowed the full run of the cottage, though not until the wings had been clipped. It used to sit in some dark corner during the day, giving but little notice of its presence, but as soon as all was quiet at night it would leave its hiding-place and commence flapping and tumbling all about the cottage, upsetting everything which could by any possibility be upset, and tearing to rags anything in the shape of clothing which had been incautiously left in its way. As is too generally the case in Shetland, the cottage was under the same roof with the cow-house and barn, and after the owl had ranged through these for a few nights no mice were to be either seen or heard, although the place was swarming with them previously. Towards morning the bird gradually became quiet, and then resumed its state of comparative inactivity until the succeeding evening. It was fed upon rabbits and birds, but it never seemed to require drink. Ducks and fowls were never safe when the door was open. Sometimes a live hooded crow was thrown down to it, and then a fierce encounter was sure to follow, but it was seldom of very long duration; sooner or later the head of the crow would be lying in one place and the body in another. Once the owl tried to kill a pig about a month old, but was detected in time, and upon another occasion it had the audacity to pounce upon a full-grown cat; it at once attempted to bite off the head, and would probably have succeeded if the owner had not come to the rescue, for the cat was almost powerless in its grasp. The owl often escaped, and was as often recaptured, until at last, the man having grown tired of stumbling over the rough ground in pursuit, resolved that next time he would leave it to its fate, and accordingly, when it again escaped no exertions were made to recover it. It remained among the hills upwards of two months, at the end of which time it was caught upon a low wall near the cottage, and brought home. But there was no occasion to keep the door closed. The bird having probably become aware of the inconvenience of being compelled to provide its own meals, never again attempted to escape, nor could anything induce it to leave the premises. Few pets die a natural death, and this unfortunate bird proved no exception to the rule; one night it got into the fire, and, before it could extricate itself, sustained such severe injury that it died very shortly afterwards. Another owl of the same species was kept for several months, but it died after eating a small piece of salt fish.

Henry L. Saxby.

Baltasound, Shetland, August 31, 1864.

Other Notes on the Birds which breed upon Walney and adjacent Islands. By H. Ecroyd Smith, Esq.

p 9156

Having perused with great interest the animated description by Mr. Harting (Zool. 9156) of his visit to Walney during the past breeding season, though no professed ornithologist, I cannot refrain from offering a record of my own experience during two similar visits to this interesting locality, showing not only remarkable discrepancies in the habits of some of the breeders in different seasons, but, more extraordinary still, between Mr. Harting's observations and my own, only two or three days having elapsed between that gentleman's visit and my second and latest.

Hoping to find at least a few species of sea-fowl breeding upon the *smaller* sandy islands off the Furness coast, accompanied by a young neighbour, I started from Barrow (reached over-night) early in the morning of the 3rd of June last for Foulney, first following the railway towards Peel for a mile, and thence along shore to Roe Island, insulated no longer, the railway embankment joining it to the main. A few ring dotterells were flying about, but no eggs were noticed in our haste for better sport on Foulney, access to which, the tide being up, could only be obtained by boat; and from the new pier we hailed a small cobble, somewhat disheartened, however, by a coast-guard here all but offering us a sovereign apiece for the eggs we should obtain.

Nearing Foulney several flocks of birds rose from its further side, startled, as we soon found, by the approach of a shooting party, and subsequently stragglers only were seen, chiefly oystercatchers, two of which we saw brought down, destined for specimens in a local museum. Greatly disappointed to find the whole surface of the island a dead level, without place of hiding or even partial seclusion for incubation, we returned to the strand, and made the circuit of the place without finding a single egg, and, the tide now permitting, regained Roe, by traversing Little Foulney, a huge bank of sand crowned by pebbles, but these being covered at high water cannot be available for incubation. Formerly, according to authentic report, and even to within the last year or two, Foulney was a good breeding station for many species; but, through increased travelling facilities, the isle is now visited by so many shooting parties that I much doubt whether any birds incubate here, save perhaps a few pairs of terns or ring dotterells.

A deep channel still separating us from Peel Island, recourse was again had to the boat, which soon landed us near the Inn and ruins of the Castle, better known by its other designation "The Pile of Fouldrey," whose walls, some erect, others toppling or toppled over into the sands beneath, have a peculiarly romantic effect upon these open sandy shores, which in winter must be bleak and desolate in the extreme. The nest of a titlark was the only one found here; but, sanguine of good success in the (to me) unexplored regions of South Walney, we waded across the sloppy channel, and struck the sandhills a little northward of the Lighthouse. Here a close search among the "hawes," and in the occasional damper hollows, of a couple of hours' duration, was solely rewarded by the capture of a young ring dotterell, which, however, caused no little amusement by its artful pretence of inability to run, until a favourable opportunity presenting it scudded away, with almost inconceivable rapidity, over a long stretch of sand, and was out of sight in a moment.

The western shore was now resorted to, but with no better success, and as evening was fast wearing away, we crossed the isle to Biggar, and after some little difficulty procured a bed at the ancient village hostelry, where the landlord informed us we were too late for the eggs at the south end, as a number of birds (blackheaded gulls, probably) had been breeding in the hills still nearer to the Lighthouse than we had thought probable, and their eggs having been mostly taken by its keeper, he had been threatened with law proceedings by the tenant farmer, who claimed all save such as might be found upon the beach, *i. e.*, between high and low water.

Early next morning the exploration of the western shore was resumed, at first without discovering a single nest, though ring dotterells were becoming more and more numerous; and when at length a spot was reached, nearly opposite North End Farm-house, where oystercatchers had bred last year, and where appearances spoke of recent occupation also, without any eggs being noticed, we almost despaired filling a single box. I soon, however, had reason to suspect some nests had been already robbed, and shortly eggs of the common tern appeared in twos and threes sparingly, afterwards, however, in great numbers, with here and there a nest of the oystercatcher or ring dotterell full of eggs, which were mostly freshly laid.

For the sake of convenience, let us now compare observations, where differences appear: Mr. Harting's are distinguished by inverted commas; my own follow.

Common Tern.—May 30, 1864. "Birds actually disturbed from their eggs."

June 3, 1863. None seen on or near their eggs, 10—12 A. M.

June 9, 1864. None seen on or near their eggs, 10 A. M.—2 P. M. As many of the nests contained the full complement of eggs, and some were to a certainty more or less incubated, we can only suppose the birds were fishing at the above times.

"No real nest; eggs laid in hollows of the bare ground."

1863. No nest; eggs found just above high-water mark on bank of pebbles; several not even in a hollow; some possibly displaced by advancing spring tides, or even removed by the bird itself from a lower inundated place of deposit.

1864. But few eggs deposited on the bare pebbles, or even sand, and these invariably in hollows. Nine-tenths of the whole laid in hollows formed in the drift sea-weed.

"Eggs in no instance laid *outside* the sand-hills."

1863. In every instance outside (seaward) of the sand-hills.

1864. Mostly outside the sand-hills. Some few in hollows nearly encompassed by sand-hillocks, but closely abutting on the beach.

"Eggs very round."

1863. Eggs differing in shape, some oval as a pigeon's, others round as any sparrowhawk's.

1864. Eggs oval, without exception, though five times more numerous than the previous year.

"Called 'sparling.'"

Probably the usual appellation here; but further south, round to the Mersey, the bird is called a "shrike," from its peculiarly harsh cry.

Lesser Tern.—"Five or six birds seen; three nests."

1863-4. A few birds; no eggs found, or nestings distinguished from last-named species.

Arctic Tern.—"Four nestings, all within the sand-hills."

1863-4. No certain nestings. My friend Mr. Alexander Cooke, who is well acquainted with the tern family, and has twice visited Walney, as well as the Fern Islands, during the breeding season, still strongly doubts either this or the following species breeding here: he regards the shooting of a bird in *mere proximity* to any nest by no means conclusive as to the parentage of the eggs, and that nothing short of capture upon the nest or eggs can be held conclusive, seeing that the eggs of the three species, common, arctic and roseate, all run through precisely the same varieties, and when mingled are wholly undistinguishable.

Roseate Tern.—"Several birds seen; nests presumed."

1864. Two eggs were brought me, which may possibly belong to this species. They are of a much lighter ground colour than those of the arctic or common tern, and more like the snipe's in form.

Oystercatcher.—"Eggs 3—4, placed (small ends together) in hollows of the sand. Birds never near their eggs."

1863. Eggs 3—4, all in nests, or circular scoopings in level tops of pebbly bank, and out of reach of spring tides; partially lined with bits of large shells and fragments of wood or sea-weed. Several birds, disturbed from their nests by our approach, continued very near.

1864. Eggs chiefly placed as last season, but a few found in mere hollows of the sand, like those of ring dotterell. One pair disturbed from the nest.

Ringed Plover or *Ring Dotterell.*—"Eggs placed in sheltered position in hollows of the sand, for want of materials."

1863-4. Eggs placed in hollows scooped in the sand, upon small hillocks or banks within sheltered gullies running into the hills from the beach. In 1862, however, Mr. A. Cooke found a nest considerably outside the hills, and uncommonly exposed. Fragments of sea-weed and the fine roots of bent and other grasses abound here, as also abundance of broken shell and small pebbles, yet I have never found such used by this species either here or in other northern English breeding-places with which I am acquainted.

Shieldrake.—"Many birds seen; reported to breed in old rabbit-holes."

1863. Several birds seen and suspected to breed.

1864. At the north-west end of the island saw ten young birds (two miles from any house) running in single file from the hills to the beach. Upon seeing us they quickly diverged for the hills again. Several pairs of old birds were then feeding at low water.

Wheatear.—This species abounds (as throughout Lancashire) on sandy commons near the sea, more especially affecting old rabbit-warrens, the forsaken burrows being generally selected for incubation. The nests are frequently placed several feet down, and are consequently difficult of extraction: the eggs I find to differ considerably from examples procured further inland, being smaller in size, much paler in colour and also of more delicate texture.

Cuckoo.—Mr. Harting expresses surprise at meeting with this bird on Walney, but, like the wheatear, it is of very common occurrence all round the sandy shores of Lancashire and Cheshire; and among the sand-hills near Formby, where it is particularly numerous, I have found *duplicate* eggs in more than one nest, and finding many other instances to have occurred for at least several years past, this fact must be acknowledged as a remarkable normal feature of the locality. Whether in most of these cases the pair of eggs are laid by one bird or two is a moot point: I incline to the former supposition, and find myself not singular herein, as Captain Thomas Brown, in his edition of White's 'Natural History of Selborne,' 1835, pp. 81—87, after quoting the observations of a brother naturalist on the habits of the cuckoo, alludes to the discovery of two of its eggs in one nest as proof of the bird laying more than one, which some had doubted. This remark would lose all effect, but for the writer's evident conviction that the eggs were the product of a single bird. We have all much to learn anent the breeding habits of this favourite visitant, and ought not to dogmatize on observations made in any single locality, which may be very far from presenting us with the whole truth.

Again, do not the discrepancies above noted in the breeding habits of several of our sea-birds prove great latitude to be necessary in any professed definition of those outward circumstances so remarkably altering the cases? Evidently the tides, the temperature and the amount of wind or wet of the season must always, to some extent, be taken into account.

H. Ecroyd Smith.

Egremont, Birkenhead, September, 1864.

The Decrease of Birds at Flamborough.—Every lover of Ornithology, when reading Colonel Newman's article, in the October number of the 'Zoologist (Zool. 9292) must deplore with him the rapidly diminishing numbers of birds on Flamborough Cliffs, and he only re-echoes the long-standing regrets of every intelligent person in the district; but the causes he assigns them to, lead to erroneous conclusions. Colonel Newman attributes the decrease of late years to the "taking of the eggs." Passing over the observation of the birds breeding in April and May as of course but a *lapsus calami*, as it is too well known the breeding season does not begin before June, it is a fact unquestioned by residents on the spot that this very partially arises "in consequence of the farmers allowing their eggs to be taken," but from the wanton destruction of the birds by the innumerable shooting parties (of which I regret to see Colonel Newman more than once a member), generally strangers to the district, and brought down in a great measure by the facilities offered of late years by cheap trains from the West Riding and manufacturing counties, and of which every member who fancies himself a sportsman considers a gun, for the express purpose of "shooting gulls at Flambro'," a necessary part of his enjoyment. These people, by the incessant popping of guns, keep birds of naturally shy habits in a constant state of alarm, and not alone this, but for every bird they kill, they destroy a nest of eggs or young in the cliffs above, and this with an intensity of destruction, as in the watering season (commencing as early as June) excursion trains are already extensively patronized, and the destruction is thus committed upon parents of families, to which the taking of their first or second set of eggs is a comparative trifle. Col. Newman admits this, when he writes of having himself a "tolerable," and again "an excellent day's sport amongst the birds," and then observing that they are breeding "until late in July." As regards the taking of the eggs, the danger of obtaining them limits the climbers to a very small number,—this year, I believe, only four. These men, looking on it as a sort of monopoly, are as anxious for the preservation of the birds as any ornithologist can desire: they parcel out the line of cliffs amongst them at the opening of the season, each taking about a mile, and are as systematic in their mode of procedure as any Icelander in the collection of the eider-down. They limit their descents over the same ground to two in number, not baring the cliffs entirely, but leaving rallying points for the birds to collect around again, and it is well known they will a third time renew the process of incubation without the number of eggs being seriously impaired. In the face of these facts, any action on the part of the landowners in preventing the taking of the eggs would unfortunately serve the cause only in an extremely partial degree; the high seas would continue open to all, and the boatmen below—who look upon the shooting parties as a large item of the summer's profits and the birds as one of their vested interests—would remain as open to the allurement of half-a-sovereign as before, although they one and all admit they are killing the goose for the sake of the golden eggs. Uria lacrymans, I will add in conclusion, always was a scarce bird.—*N. F. Dobrée; Hull, October* 8, 1864.

Notes on the Ornithology of Flamborough.—Is not Colonel Newman mistaken when he speaks of the turnstone as common at Flamborough in July (Zool. 9292). The turnstone is only a winter visitant to the Yorkshire and Lincolnshire coast, and then only in small parties, and is by no means common. As far as my own experience goes, it does not arrive on our shores before the latter part of August or early in September. Colonel Newman also speaks of the ducks "which breed in May in these cliffs," and of the cormorants "which are numerous early in the season." From strict inquiries made during a visit in that neighbourhood in July last, respecting the birds which visit these rocks in the spring, I did not hear of ducks of any species breeding there; and, although the cormorants formerly frequented these stupendous sea-cliffs in considerable numbers in the spring, I am afraid I am but too correct in saying that from constant persecution they have now ceased to do so, the appearance of an odd bird or so being considered an unusual occurrence. All will agree with Colonel Newman in his regrets on the destruction of the eggs of the sea-fowl; but this is a question which must rest with the landed proprietors in the neighbourhood, as they have doubtless the power to prevent the plunder of the eggs in the spring. Certain it is that should the present system of robbing the nests, and the wholesale slaughter of the birds during the summer, be continued some years longer, it will end in the extinction or banishment of those feathered tribes which now gladden the eyes of many a true lover of nature, and afford an additional attraction to the romantic scenery of this coast.—*John Cordeaux; Great Cotes, Ulceby.*

Birds that sing as they Fly.—White, in his 'Natural History of Selborne' (letter 27), gives a list of birds that sing as they fly. This list comprises the sky lark, tit-lark, wood lark, blackbird, whitethroat, swallow and wren. To this list ought to be added the missel thrush, who sings as it flies, to which I have often been both an ear and an eye witness. The missel thrush is a common bird in this neighbourhood. The common linnet is also another bird that I have heard frequently singing as it flies, especially when they visit the line folds in flocks, and also in the breeding season.—*John Ranson; York.*

Goshawk on Filey Brigg.—On Tuesday afternoon, whilst Mr. Richard Lorriman, feather preserver, was on Filey Brigg, he noticed a large hawk flying low and hovering about in search of prey. Crouching down he awaited its approach, levelled his gun, fired and it fell. Mr. Winson, bird-stuffer, in whose possession the bird now is, pronounces it to be a specimen of the goshawk in exceeding fine plumage.—*Sheffield Daily Telegraph, October* 8, 1864. [Communicated by Col. Newman.]

Fieldfare in July.—My friend Mr. R. M. Presland possesses a fieldfare, which he shot at Gravesend on the 3rd of July, 1864. Is this not very late for this bird of passage? He sent it to me to preserve, and on opening the bird I found three eggs formed, about the size of a horse-bean.—*J. A. Clarke;* 11, *Duncan Place, London Fields, Hackney, October* 6, 1864.

[The occurrence of the fieldfare in July is interesting; but is there no mistake about the eggs? I do not allude so much to the somewhat late period of the year as to the presence of three eggs of equal size, as the comparison to a horse-bean implies: eggs, prior to the period of oviposition, appear as clusters of minute objects, often not so large as the head of a very small pin; but, as the period of oviposition approaches, the most advanced egg has usually ten times the bulk of the second, the second ten times the bulk of the third. I have never seen three eggs of the size spoken of in any bird, as far as I recollect. The frequently repeated assertion that the sand grouse shot in 1863 contained two equally developed eggs was erroneous; such birds were unquestionably males.—*Edward Newman.*]

Light-coloured Robin.—Whilst out shooting this morning I had the good fortune of seeing and securing a very fine specimen of the albino robin: it was perfectly white, with here and there a slight tinge of cream-colour; the latter was very faint. I have never heard of one of these birds being shot or seen in the neighbourhood before.—*E. D. Hamel; Bole Hall, September* 27, 1864.

Curious Habit of the Robin.—During last winter and early spring I, on several occasions, observed a little habit of the robin which seemed to me somewhat peculiar. When two robins met, one of them would fly to within a few feet of the other, and, taking its stand on a branch, or sometimes on the ground, would raise its head in a vertical position, and sway its body from side to side without moving its legs, uttering at the time a quick energetic warble. The other would look on calmly and listen, making no counter-demonstration. Is this an address to a female, or a song of defiance to an enemy? I have not seen this habit alluded to in books.—*G. Roberts; Lotfhouse, Wakefield.*

Anthus campestris or A. rufescens at Brighton.—I send you a notice of the occurrence of the tawny pipit (*Anthus campestris* or *A. rufescens*). On the 30th of September, 1864, a boy caught in a clap-net one of this species near Brighton, and brought it alive to Mr. Swaysland, naturalist, living in the Queen's Road, Brighton, where I saw it alive about an hour afterwards. This is the third known British example. The two first were pointed out by me in the 'Ibis,' vol. v. No. 17, January, 1863, p. 37. Hitherto these birds had passed for Anthus Ricardi, and I very much wish that any gentleman possessing a supposed Richard's pipit, well authenticated as killed in the British Isles, would examine it, and ascertain if he has not got a tawny pipit by mistake. The difference between the two species is so well known that I do not wish to take up your space by mentioning it here. However, I would only say if he has any doubt let him compare the hind claw of his bird with Yarrell's figure, p. 388, vol. i., 1st edition. If it does not correspond in length, he may conclude that he has not Richard's pipit, which is extremely rare in Great Britain, even if it has ever been killed here, of which I entertain strong doubts. My own belief, which is corroborated by the communications of several of our best ornithologists made to myself, is that Anthus rufescens may be met with pretty often on our south coast, and if public attention is turned to this bird, others will doubtless be discovered. The particular one now in Mr. Swaysland's possession had apparently been struck by a hawk, as there was a wound unhealed under the feathers, of such magnitude as to indicate a narrow escape. Yet the bird, which I consider is a male, was in good health and fine condition. And here I may remark how nearly the period of the year corresponds in each date belonging to the three examples. The first was shot August 17, 1858; the second taken September 24, 1862; and the third September 30, 1864: the two last in nets. It may be asked, why have none ever been obtained before? To this I reply that they probably have been overlooked, and also that of late years a new system has prevailed on these downs of catching larks by means of a decoy bird and clap-net—a plan long pursued with other kinds, but only recently adopted with larks, which were always either shot or taken in a drag-net.—*George Dawson Rowley; 5, Peel Terrace, Brighton, October* 15, 1864.

The Mountain Finch.—The mountain finch (*Fringilla montifringilla*) was seen in several flocks last winter in this neighbourhood. A youth, a neighbour of mine, shot ten at a shot. They were picking by an oat stack.—*J. Ranson; York.*

Swallows.—This year the first swallow was seen here (ten miles west of York) by six observers, on the 10th of April, and on the 11th a cat killed one in my neighbour's cow-house. Two were seen on the 13th, and on the 17th they made their appearance in the village in considerable numbers; on that day I saw two inspecting their last year's nest, in a deserted chimney, where there had been a nest for the last seven years. They have left us much earlier than usual, the 10th of October being about the time of their departure; but this year I have not seen one for above a week. A gentleman in the village, who gives them every encouragement, had a few years ago sixty nests on his hind's house; this year he has not one.—*Id.; October* 1, 1864.

Late stay of Swifts.—I received information yesterday from a friend, that two individuals of the common swift (*Cypselus apus*) were seen, during the course of last week, flying in an agitated manner over the parish of Brooke, which is situated about eight miles south-east of Norwich: one of them has since been shot by the gamekeeper residing in that district. This is, I believe, unusually late for the occurrence of this species. Two specimens of Hirundo riparia were obtained, in 1861, as late as the 11th of November, at Carrow Works, near Norwich: they were young birds of the year.—*T. E. Gunn; Norwich, October* 11, 1864.

Scarcity of Swifts and Snipes.—Swifts are certainly much scarcer than they were fifty years ago: this I attribute to the increase of young sportsmen, who constantly try to improve their aim by shooting these innocent birds during their stay in England. The greatest number I have seen lately were near Conway Castle, North Wales, where these birds have ample scope, and places to deposit their eggs, out of the reach of rats or boys. Taking the country generally, there is certainly a great decrease in the numbers of these wonderful birds; and the same observation may be made respecting snipes, which were much more abundant formerly, even in parts of the country *not drained*, than they are now; but when you find that twenty persons in one parish take out game certificates, where formerly two or three did so of yore, is not the cause apparent?—*H. W. Newman; Hillside, Cheltenham.*

Martins congregating in August.—A writer in the October number of the 'Zoologist' (Zool. 9282), says he saw about two hundred martins on the 13th of August at Willesden, Middlesex. It is somewhat remarkable that on the same day I had made a note of their appearance here, having seen about one hundred hawking near the sea-cliffs, and occasionally settling on the roofs of the houses. The day was fine, and the thermometer, about noon, 70° in the shade, so that it was not cold that caused the gathering. Your correspondent does not say whether those observed by him were young or old birds, but I am inclined to believe they were the former, for those seen here were birds of the season; I observed them closely, and could not be mistaken. He inquires "whether it is not rather early for martins to prepare for their departure?" I think not, having frequently known them to congregate on this coast in August, which has been recorded, and I have stated it to be my belief that the young birds are the first to migrate, excepting a few of the later broods, which occasionally linger here until December. When living in the North, I never remarked this instinctive gathering of young birds,—a proof that it is only when migrating that they thus assemble. Though I have occasionally shot them, I now find no difficulty in distinguishing them on the wing, at a moderate distance, for they are generally smaller than the adults, the tail shorter, the plumage speckled, and the flight less rapid and sustained. A few days later, namely, on the 29th of August, a considerable flock of young swallows made their appearance: I will not state positively that there was not an old bird amongst them, but I think I should have noticed it if there had been, for I watched them narrowly, and to a practised eye the young of this species is as readily distinguished, as that of the former, for at this season (August) none of the young birds have the tail fully developed; it is generally but slightly forked, and not unfrequently quite even, and the plumage more or less speckled: they might be mistaken for the martin by the unscientific observer.—*Henry Hadfield; Ventnor, Isle of Wight, October*, 1864.

Food of Young Cuckoo.—Having just received the 'Zoologist' for this month I have been unable to reply sooner to your suggestion (Zool. 9282), as to the vegetable matter which I found in the stomach of a young cuckoo. I am quite certain that the mass did *not* consist of the hairs of caterpillars such as are frequently found in the stomach of this species, the fibres being of some length, and branching into finer filaments. But, to make sure, I dried some and found that they burned readily, without any animal smell. Since writing my first note, it has occurred to me that these fibres may have been part of the nest, the young bird having either swallowed them along with its food or devoured them in a fit of greediness. At least I can think of no more probable explanation.—*Edward R. Alston; Stockbriggs, Lesmahagow, October* 11, 1864.

Sanderling at Gravesend.—My friend Mr. R. M. Presland has a bird he shot at Gravesend this spring that I do not know the name of, and it is not in Morris's work. The bird is of the same size as a stint. The bill is one inch long; neck, chest and belly white; from the top of the head, back of neck and back light gray, with a black mark in the centre of each feather; long tapered wings, the longest feathers black, the shorter ones dark gray, mottled with black; legs one inch long from the joint, and three toes one inch and a half; tail gray, longest feathers in the centre.—*J. A. Clarke; 11, Duncan Place, London Fields, Hackney, October* 6, 1864.

[The bird is doubtless a sanderling in winter plumage, the measurements and description agree very nearly, and the special mention of the toes makes it almost a matter of certainty. Morris only figures the summer dress, which accounts for my correspondent not recognising the bird.—*Edward Newman.*]

Note on the Appearance of the Ruff and Reeve in Lincolnshire.—On the 23rd of September I shot a young ruff out of a flock of twelve or fifteen of these birds. I had noticed them some days previously, in company with green plovers, feeding in some low grounds in this parish, and, curiously enough, within one hundred yards of a railway. They did not appear to be very wild, for although the peewits rose in a body and flew off, on the passage of a train, the ruffs merely flew for a short distance, and alighting commenced feeding again. When going any distance, they flew with great rapidity, and in the form of the letter V. They are the first I have seen during a residence of fifteen years in the county, and therefore register it as an interesting ornithological fact. Years since they were frequently seen and taken in the Lincolnshire marshes, but drainage and the fowler have long since driven them away, and we should now as soon expect to hear the "boom" of the bittern as to see a flock of ruffs and reeves.—*John Cordeaux; Great Cotes, Ulceby, Lincolnshire, October*, 1864.

Note on the Appearance of the Little Stint in the Humber.—I had a specimen of the little stint (*Tringa minuta*) brought to me this morning: it was shot on the Humber flats, and, as my informant told me, was the only one of its sort, and was feeding in company with some dunlins. It is the first specimen I have had from the Humber, although I believe the minute stint occasionally visits the mud flats in the spring and autumn. I have seen with my landscape-glass, in the former season, what I feel quite certain were minute stints feeding in company with dunlins, &c., but, owing to the general impassable nature of these mud flats, have never before been able to procure a specimen. The bird was in fine autumn plumage; the tail of twelve feathers, having the two middle and two outside longest, making it double forked. The two central feathers of the tail clove-brown, the remainder light gray. Forehead and a very distinct streak over the eye gray-white.—*Id.; September* 18, 1864.

Manx Shearwater at Flamborough and Filey.—In the October number of the 'Zoologist' (Zool. 9291) I reported the capture of a Manx shearwater, stating that I had never seen it before, and believed it to be a very rare bird on this portion of the east coast. My specimen appears to have been one of a flock of these shearwaters, for although it was alone when shot, it may have been separated from the rest by repeated attempts to secure it. I arrive at this conclusion because my friend Mr. T. Buckley shot no less than three specimens off Filey, only a few miles from the point where mine were shot between the 4th and 6th of July. Mine was shot on the 16th of the same month. I have seen all Mr. Buckley's specimens, two of which were mature and the other a bird of the year. Mr. Buckley told me that he badly wounded a fourth specimen, which escaped, and that he saw a fifth. Moreover, I purchased two mature specimens that had been shot also off Filey about the same date: these birds had, unfortunately, been skinned just previously to my receiving them, so that I was unable to determine the sex, as there do not appear to be any sexual distinctions in the plumage, &c. Still, however, I believe these birds to be extremely rare visitants to the east coast of Yorkshire. They are unknown to the oldest boatmen and collectors to whom they have been named; and my own specimen, shot on the 16th of July last, is certainly the first I have seen shot in this locality.—*W. W. Boulton; Beverley, October* 11, 1864.

Note on the Mountain Linnet or Twite.—In the October number of the 'Zoologist' (Zool. 9280), Mr. Cordeaux, of Great Cotes, Ulceby, Lincolnshire, reports as an unusual circumstance the capture of a mountain linnet, so early in the season as the 16th of August, so far south as the locality named above. Until I read Mr. Cordeaux's note, it never occurred to me that it was unusual to meet with Fringilla montana at this time of the year, and I am under the impression that I have seen many specimens of this species quite as early in the season as the 16th of August in the neighbourhood of Beverley. The only instance I find recorded in my note-book, however, occurred in 1862, when a pair of twites, male and female, were shot in the Burton Bushes, close to Beverley, on the 7th of August. I saw these birds in the flesh, so that I cannot have the slightest doubt as to their species. They belong to a friend of mine, and I have no doubt that I could have them, should the period of their capture render them of sufficient interest. Both these birds were killed at one shot, and were evidently a pair. They were mature, and as they were frequenting low furze bushes at the time of their capture, I thought then, and do so still, that they had bred in the neighbourhood. Fringilla linaria, or the lesser redpole, breeds with us regularly. I have its nest and eggs, and could obtain several each season. It remains in this locality throughout the year, and is met with in every stage of plumage. I only once obtained a single specimen of Fringilla borealis, or the mealy redpole: it was shot out of a flock that visited the neighbourhood several years ago, in the early winter season.—*Id.; October* 19, 1864.

Habits of Spiders.—In an arbour in my garden I have nailed up a piece of old carpet against the trellised side, to keep the sun from my pupæ. In a fold of this carpet, which I daily inspect, as it makes a good trap for moths, I have observed for a fortnight past a Depressaria applana that has never moved all that time, being always on the same spot, with its head downwards. In the same fold, close to it, are several web-making spiders, apparently of more than one species, any of them large enough to tackle a Depressaria, but they have never touched it. This is not the first time that I have noticed the extreme sluggishness of that moth through the autumn, so that I was not surprised to see it; but the abstinence of the spiders set me thinking what could be the cause of it. I must premise that I know next to nothing about spiders, and it seems to me that those who are well acquainted with their habits do not, so frequently as they might, publish their observations in the 'Zoologist.' In the hope that my ignorant queries may stir up some arachnidist to give us an insight into the habits of these interesting creatures, I venture to conjecture, from the "happy family" in the fold of the old carpet:—*First.* That the spiders came there for the same purpose as the Depressaria,—to spend the winter in a torpid state, thus long before the time; and that their unusual gentleness was owing to loss of appetite at the approach of torpidity, or perhaps to the desire to be on good terms with their neighbours, which we all feel as Christmas draws near. This conjecture is inconsistent with the activity of the spiders when observed. *Secondly.* That they came there to prey upon the insects resorting thither for shelter; but that the Depressariæ were not their proper food; and consequently that different species of spiders feed on different insects. *Thirdly.* That the instinct of web-making spiders is so narrow and confined, that they are only impelled by nature to seize those insects which fly against, or otherwise interfere with, their webs, and this the quiet Depressaria had never done. If you or any of your readers will kindly enlighten me in this matter I shall feel much obliged.—*E. Horton; Lower Wick, Worcester, October* 10, 1864.

PS. On unfolding the carpet this morning I missed my Depressaria, and saw a wing of the same species in one of the webs.—*E. H.; October* 11.

New Locality for Gastropacha ilicifolia, with Description of Larva.—The following is a description of a larva taken on the 3rd of August near Lynton, North Devon, in a wood abounding with bilberry:—A Bombyx larva, apparently full fed, length one inch and three-quarters. Head and body hairy, cream-coloured, dusted with black. Hairs on back dark, short; on sides in long white fascicles (a few darker interspersed) curving downwards. Head pale drab, the black atoms on it in longitudinal bands. On the second segment a reddish blotch, bordered with black atoms; a series of markings, something like the ace of clubs, down the centre of the back, embracing the dorsal line, formed of thicker black atoms, blackest on the fourth segment, into which run lateral stripes of black atoms, from each black spiracle directed backwards. An indistinct spiracular line of black atoms. Legs reddish, with black spots; claspers the colour of the body, with a black stripe on the upper surface, orange underneath. Along the ventral line a chain of black spots, very large and conspicuous, from commencement of the claspers to the anal segment, gradually smaller towards the head. The larva was sickly when taken, and is still in a bad way, probably ichneumoned. The above description agrees in the main with that of G. ilicifolia given in Stainton's 'Manual.' Its resemblance to a Gastropacha larva makes me think it must belong to that species. —*E. Horton.* PS.—I have just received a note from Mr. Buckler, in which, referring to the above, he says, "The larva skin, which I return to you, is undoubtedly that of G. ilicifolia."—*Rev. E. Horton, in 'Entomologist's Monthly Magazine' for October,* 1864.

Life-History of Liparis auriflua.—In a recent number of the 'Zoologist' (Zool. 8969), Mr. Clifford, of Chelsea, expressed his surprise at finding the larva of Liparis auriflua in October, and also at its "hybernating occasionally," and Mr. Newman asks "Is this fact new?" In the succeeding number, the Rev. H. Harpur Crewe expresses his astonishment at Mr. Clifford's surprise, and states that this larva always hybernates. Undoubtedly Mr. Crewe is correct, and I may add that there is not a month in the twelve in which it may not be found. The full-grown larvæ generally remain in some quantity until the middle of July, and the earlier portion of the succeeding brood hatch about the close of the month, and in August become abundant. Had Mr. Crewe added to his remarks a short life-history of this insect, which appears to be less known than that of many of our more rare Lepidoptera, it would have been acceptable to some of the readers of the 'Zoologist.' The eggs are laid during July on the under side of the leaf of many of our common trees and shrubs, especially the hawthorn, in batches of twenty to thirty, and are covered with down or fur by the parent moth: they hatch in about ten days, and the young larvæ feed in company until October, moulting twice, and then prepare their winter quarters; at this time they are about half an inch long. A suitable retreat is chosen about the thicker stems of the food-plant, under loose or projecting pieces of bark, or in the concave surface of a curled leaf. An outer cocoon-like web is first spun; this finished, each larva forms for itself within the web a distinct little egg-shaped cocoon, flexible, of close texture, and very tough; the number of cocoons in each web varies. I have several lying before me: one contains five, another three, another two, and others have only one each. Within these little cocoons the larvæ lie coiled during the winter, leaving them in spring to feed on the newly-expanded foliage under which they shelter until the young shoots of the plant have progressed; they then seek the more juicy food which these supply, and being now nearly full grown and of bright colour, become conspicuous objects on the hawthorn hedges. From the end of June to the middle of July they retire for the purpose of pupation, spinning up among the surrounding foliage or other suitable places that may offer, and in a fortnight or three weeks the perfect insect appears.—*George Gascoyne; Newark, October*, 1864.

Description of the Larva of Thera coniferata.—At the beginning of the present year a few eggs were sent to me by a friend. Six hatched; of these only one, I am sorry to say, came to maturity. When full grown it was short and stumpy, extremely like the larvæ of some of the Eupitheciæ. Head pale brown. Ground colour grass-green. Dorsal line broad, pure bluish white; this is bordered on each side by a slender stripe of the same colour. Spiracular line the same. These stripes are all very clear and well defined. Segmental divisions yellow. Prolegs pink. There are no dots or marks. It is one of the most sluggish creatures I ever saw, lying for hours, even days, in the same place, just stretching itself to get at the food within reach. It remained a long time in the larval state, as it was hatched the third week in March, and did not spin up till June 6th. It effected this change between moss and the sprig of juniper on which it was feeding, so unwilling was it even then to move. The pupa is dark grass-green, abdominal segments lighter. The perfect insect appears in three weeks. —*Rev. J. Greene, in 'Entomologist's Monthly Magazine,'* p. 71.

Immense Swarms of Syrphus Pyrastri.—Any lover of Entomology could not fail to read with interest the various communications from your correspondents in the 'Zoologist' and 'Entomologist,' of the occurrence of multitudes of Syrphus Pyrastri, which has lately made its appearance in such incredible numbers, and over such an extent of coast; and your scientific comments on the history of the insect and the probable cause of its occurring in these countless myriads in the past season. Having witnessed a similar occurrence on the Sussex coast, which, being so widely separated from the localities in which the appearance of the insect in such profusion has been recorded, I thought it might be worth sending to you what I have myself observed. While staying at Eastbourne, in the month of August, I noticed large quantities of this fly settling on the various flowers; but on bathing on the 18th of August, while taking a swim out, about fifty yards from shore, I passed through a line of these insects, of *various sizes*, dead, and floating with the tide in an easterly direction. This line was about a foot in width, and, from the conformation of the coast at this part, I have no doubt it extended for many miles. A few days later, being on the shore near Seaford I saw a great number of the same insect, which settled on any flowers that might be at hand, on the beach, and many on my own clothes whilst sitting down to rest.—*James Dutton; Hammersmith, September*, 1864.

Proceedings of Societies.

ENTOMOLOGICAL SOCIETY.

October 3, 1864.—F. P. PASCOE, Esq., President, in the Chair.

Additions to the Library.

The following donations were announced, and thanks voted to the donors:—'Exotic Butterflies,' by W. C. Hewitson, Part 52; presented by W. Wilson Saunders, Esq. 'Journal of the Proceedings of the Linnean Society,' Vol. viii. Part 1; by the Society. 'Boston Journal of Natural History,' Vol. vii. No. iv.; 'Proceedings of the Boston Natural History Society,' Vol. ix. Sheets 12—20; by the Society. 'Notes on the Family Zygænidæ,' by A. S. Packard, jun.; by the Author. 'The Zoologist' and 'The Entomologist' for October; by the Editor. 'The Entomologist's Monthly Magazine,' No. 5; by the Editors. 'The Journal of the Society of Arts' for October; by the Society. 'The Reader' for October; by the Editor. 'Popular Natural History of Great Yarmouth,' by B. T. Lowne; by the Author.

The following addition by purchase was also announced:—'Genera des Coléoptères d'Europe,' Livr. 121—123.

Exhibitions, &c.

The Secretary announced the arrival of, and exhibited, a miscellaneous collection of insects from India, collected and presented to the Society by Lieut. R. C. Beavan, Bengal Revenue Survey. Probably the most interesting specimen was a small Mantis, which Prof. Westwood believed to be hitherto unique in his own collection.

Mr. Janson exhibited an extensive series of insects of all orders collected by Mr. Thomas Pullinger, R.N., chiefly in the vicinity of Rio Janeiro.

Major Parry sent for exhibition a box of beetles collected at Gibraltar by his son, Lieut. Parry, R.A.

Mr. S. Stevens exhibited a large Curculio, from the body of which a number of filamentous Fungi had grown. Prof. Westwood remarked upon the frequent occurrence of fungus-covered Curculionidæ, and suggested that it arose from those beetles dying amongst decayed wood and in damp situations conducive to fungoid growth. Prof. W. also alluded to the different kinds of "mould" found upon beetles, some of which were soft, like cotton-wool, whilst others were hard and required to be actually scrubbed off the specimen: he thought there were not less than six or eight kinds of mould to be found on insects.

Mr. Bond, after referring to the exhibition at the previous Meeting of larvæ of an Agrotis, which had proved very destructive to turnips, and giving corroborative testimony to the extent of the damage done by the insects, mentioned that, on opening a partridge which he recently shot, he found the crop full of the larvæ which infested the turnips.

Mr. David Sharp sent for exhibition three species of Coleoptera new to the British List, and one of them apparently undescribed: all three were recently captured by him in Scotland. The following description and notes were also communicated:—

"1. **Autalia puncticollis** (*nov. spec.*).

Nigra, nitida, subtilius pubescens, antennarum articulo primo pedibusque piceis, prothorace abdomineque evidentius punctatis, illo medio obsolete canaliculato. Long. 1 lin.

With the facies of A. rivularis, but the size of A. impressa; from the former of these it differs by having its prothorax more evidently punctured, with the central channel only perceptible anteriorly; the lateral foveæ are not so deeply impressed, and those at the base of the elytra shorter. Apex of the abdomen concolorous. From A. impressa it is readily distinguished by its colour and punctured abdomen.

Four specimens from Rannoch, Perthshire; and one in Mr. Janson's collection, taken some years since in Shetland by the late Mr. Squire.

2. **Tachinus proximus**, *Kraatz, Stett. Ent. Zeit.* xvi. 25; *Ins. Deutschl.* 401.

Besides the characters pointed out by Kraatz as distinguishing this species from T. humeralis, there appears to be a constant difference in the length of the elytra, these being always relatively shorter in T. proximus.

Found by me in sheep's dung at Rannoch, and about half a dozen specimens under the same circumstances on Ben Lomond.

3. **Lesteva monticola**, *Kiesenw. Stett. Ent. Zeit.* viii. 77. *Redtenb. Faun. Austr.* ed. ii. 245. *Kraatz, Ins. Deutschl.* 933.

I have seen three British specimens of a Lesteva, which I believe should be referred to this species. Two taken by myself, one of them at Rannoch, the other in the Isle of Arran. The third is in Mr. Janson's collection, and was captured, I think, on the Cheviots."

The President exhibited a new Atractocerus and a new Cyphagogus, and read the following notes respecting them:—

"The genus Atractocerus is one of the most remarkable amongst the Coleoptera, and bears a greater resemblance to a Neuropteron than to anything in its own order; and yet we find this genus, one of the most specialized of its class, distributed over Africa, Madagascar, Java, the Malayan Islands, Australia and Brazil,—in fact, over almost all parts of the world, excepting Europe. In the Malayan Islands, Mr. Wallace discovered not less than twelve new species of this genus; Singapore and New Guinea (Dorey), the two extremes, produced each one; Borneo (Sarawak) five; the rest were scattered among the other islands. The only published species, A. morio, *Pasc.*, is the only one that appears to be common to three or four localities. If we adopt the derivative hypothesis of the origin of species, it will follow that a connexion must once have existed between the above-mentioned parts of the world, and this would pretty nearly lead to the conclusion that all lands were once connected. The Atractoceri would seem to possess a very low power of flight, and to be nocturnal. The Molucca species, A. morio, has certainly no appearance of being an intermediate form, as might have been expected. The Australian species now exhibited is new to Science; I am indebted for my specimen to Mrs. Kreusler, of Gawler, South Australia, a lady who, as I have previously testified, has been extremely fortunate in adding to our knowledge of the insect fauna of that colony, and to whom I have the pleasure of dedicating the species.

ATRACTOCERUS KREUSLERÆ.

A. brunneo-ferrugineus; capite brevi; oculis rotundatis, prominulis, antice fere contiguis; prothorace quadrato, subnitido, capite latiori; elytris oblongis, intus sinuatis; alis obscure griseis; abdomine castaneo, nitido; pedibus attenuatis, griseo-brunneis; pectore rufo-castaneo. Long. 12 lin. Hab. Gawler (Austral. merid.).

To Mr. Odewahn, also of Gawler, I owe, among many rare and interesting insects, a curious little Brentid belonging to the genus Cyphagogus of Major Parry, almost identical with a species from Natal described by me two or three years ago under the name of C. advena (Journ. of Entom. ii. 48). The type species is Indian, and has also been found by Mr. Wallace in Aru, but belongs to another category of the genus. I have dedicated the Australian species to Mr. Odewahn, and it may be thus characterized, merely premising that C. advena has a much larger head with a bilobed or emarginate muzzle, and this is almost all that distinguishes it:—

CYPHAGOGUS ODEWAHNII.

C. rufo-testaceus, nitidus; capite prothorace multo angustiore, rostro integro; elytris prothorace angustioribus, striato-punctatis; pedibus ut in *C. advena*. Hab. Gawler (Austral. merid.)."

Mr. A. R. Wallace remarked that he thought the Atractoceri were wood-borers; he had always captured them at night, at a lamp or light, and had found them to be rather quick flyers.

Paper read.

Mr. Baly read a paper intituled "Further Descriptions of New Genera and Species of Phytophaga." Two new genera, Charistena and Metaxycera are established, both belonging to the Hispidæ and nearly allied to Odontota. Of Charistena C. ruficollis, *Fabr.*, is the type, and seven new species are described under the names of C. Lecontii (from North America), C. basalis (from the Amazons), C. Deyrollei (Upper Amazons, Columbia), C. bellula (Bogotà), C. elegantula (New Granada), C. Pilatei (Teapa), C. trilineata (Yucatan). Of the genus Metaxycera, M. purpurata, *Guér.*, is the type, and three new species from the Amazons are described under the names of M. rubroguttata, M. Amazona and M. sex-pustulata.

New Part of 'Transactions.'

A new part of the 'Transactions' (Third Series, Vol. iii. Part 1), containing the first portion of Mr. Pascoe's Longicornia Malayana, was on the table.—*J. W. D.*

Dasycampa rubiginea at Oatlands Park.—Mr. S. Stevens gives an interesting account, in the number of the 'Entomologist' for November, of the occurrence of this rarity in a new locality: it was captured at sugar the first week in October. Sugar has been marvellously productive during the last week or ten days.—*Edward Newman.*

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TO CORRESPONDENTS.

DOUBLE NUMBER.—The December Number will contain all the Papers now standing over, together with Title and Index, and will be charged TWO SHILLINGS.

The undermentioned works have been received for reviews, and will be noticed in course:—

1. 'On Poisoning by Diseased Pork, being an Essay on Trichinosis.' By Julius Althaus, M.D. London: John Churchill & Son. 1864. Two Shillings.
2. 'The Birds of India.' By T. C. Jerdon. In Three Volumes. Vol. III. Calcutta: George Wyman & Co. 1864.
3. 'Ootheca Wolleyana; an Illustrated Catalogue of the Collection of Birds' Eggs formed by the late John Wolley, M.A.' Edited by Alfred Newton, M.A. Part I. Accipitres. London: Van Voorst. 1864.
4. 'A Descriptive Catalogue of the Raptorial Birds in the Norfolk and Norwich Museum.' Compiled and arranged by John Henry Gurney. Part I. Containing the Serpentariidæ, Polyboridæ and Vulturidæ. London: Van Voorst. 1864.

The Cabinets of British Lepidoptera of the late W. J. RUSSELL, Esq., of Ringwood, and the late Mr. HUGH REID, of Doncaster.

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